

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A7EA
Revision 2
Found Aircraft Development, Inc.
FBA-2C
FBA-2C1
April 9, 2001

TYPE CERTIFICATE DATA SHEET NO. A7EA

This data sheet which is a part of type certificate No. A7EA prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder Found Aircraft Development Inc.
300 Jones Road
Gravenhurst, Ontario, Canada P1P 1A1

I - Model FBA-2C, 5 PCLM (Normal Category), Approved June 23, 1965 by the FAA and February 19, 1964 by the Canadian Department of Transport (DOT)

Engine Lycoming O-540-A1C5

Fuel 91-96 minimum grade aviation gasoline

Engine limits Maximum for all operations, 250 hp. at 2575 r.p.m.
Full throttle at sea level

Propeller and
propeller limits McCauley variable pitch Model 2D36C28/80MM-6
Diameter: Maximum 74 inches, minimum 73 inches
No reduction in minimum size allowed
Pitch setting at Station 30.0: low 15.7°, high 32.0°

Constant speed governor Woodward 210395

Hartzell Constant Speed HC-927K-1D/8847-0 70 lb. (-63.0 in.)
Diameter: maximum 88 inches, minimum 88 inches
Pitch setting at Station 30.0 inches: low 12°, high 26.4°

Woodward constant speed governor B210340

Airspeed limits (CAS) V_{ne} (never exceed) 155.3 m.p.h. (135 knots)
V_{no} (max. structural cruising) 123.3 m.p.h. (107 knots)
V_A (maneuvering) 130 m.p.h. (112.5 knots)
V_{fe} (flaps extended) 108.0 m.p.h. (93.5 knots)

C.G. range
(Landing Gear Fixed) Landplane and Skiplane (See Note 4 for Ski Installations)

Gross Weight	Forward Limit	Aft Limit
2850 lb.	+17.0 in. (15.2% MAC)	+24.5 in. (27.2% MAC)
2250 or less	+15.3 in. (12.6% MAC)	+24.5 in. (27.2% MAC)

Seaplane (See Note 5 for Float Installations)

2850 lb.	+17.0 in. (15.2% MAC)	+23.5 in. (25.5% MAC)
2250 or less	+15.3 in. (12.6% MAC)	+23.5 in. (25.5% MAC)

Straight line variation between points given

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Datum	Main landing gear beam center line																									
M.A.C.	62.9 in. (L.E. of MAC is +22.40 in. aft of datum)																									
Leveling means	Aircraft cabin floor level - laterally and longitudinally																									
Maximum weight	Landplane and Skiplane - 2850 lb. Seaplane - 2850 lb. (See Note 3 for eligibility at 3,000 lbs.)																									
Minimum crew	1 (pilot)																									
No. of seats	5 (2 at +17.8 in., 3 at +61.75 in.)																									
Maximum baggage	150 lb. at +92.5 in.																									
Fuel capacity	56.0 Imperial gallons (67.3 U.S. gallons) total (+22.2 in.) 28 Imperial gallons (33.6 U.S. gallons) each wing tank. 55.0 Imperial gallons (66.1 U.S. gallons) usable.																									
Oil capacity	10.5 Imperial quarts (12.6 U.S. quarts) max. (-38.8 in.)																									
Control surface movements	<table><tr><td>Wing Flaps</td><td>0°</td><td>up</td><td>32°</td><td>down</td></tr><tr><td>Aileron</td><td>18°</td><td>up</td><td>12°</td><td>down</td></tr><tr><td>Elevator (0° Stab.)</td><td>29.5°</td><td>up</td><td>21.5°</td><td>down</td></tr><tr><td>Stabilizer</td><td>3°</td><td>up</td><td>5°</td><td>down</td></tr><tr><td>Rudder</td><td>30°</td><td>left</td><td>30°</td><td>right</td></tr></table>	Wing Flaps	0°	up	32°	down	Aileron	18°	up	12°	down	Elevator (0° Stab.)	29.5°	up	21.5°	down	Stabilizer	3°	up	5°	down	Rudder	30°	left	30°	right
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Stabilizer	3°	up	5°	down																						
Rudder	30°	left	30°	right																						
Serial Nos. eligible	3 to 27 inclusive. The Canadian Department of Transport Certificate of Airworthiness for export endorsed as noted under "Import Eligibility" must be submitted for each individual aircraft for which application for certification is made.																									
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:</p> <p>Landplane, Skiplane and Seaplane:</p> <p>(a) D.O.T. Approved Flight Manual dated February 25, 1964.</p> <p>(b) Stall Warning Indicator per Found Brothers Drawing No. W-535.</p>																									

II- Model FBA-2C1, (Bush Hawk) (Normal Category), Approved March 3, 2000 by the FAA and March 5, 1999 by the Canadian Department of Transport (DOT)

Engine	Lycoming IO-540-D4A5 (260 HP) or Lycoming IO-540-L1C5 (300 HP)
Fuel	100LL or 100 (Formerly 100/130) Grade aviation fuel
Engine limits	Maximum for all operations; Full throttle at sea level IO-540-D4A5: 260 HP at 2700 r.p.m. IO-540-L1C5: 300 HP at 2700 r.p.m.
Propeller and Propeller Limits	<p>Hartzell 3-blade variable pitch HC-C3YR-1RF/F8468A-2 (R)</p> <p>Diameter: Maximum 84 inches, Minimum 83 inches</p> <p>Pitch setting at Station 30.0: low 11.2° high 31.1°</p> <p>Constant Speed Governor, Hartzell V5-4</p>

Airspeed Limits
(CAS)

With 260 HP IO-540-D4A5 engine

Vne (never exceed)	162 m.p.h. (141 knots)
Vno (max. structural cruising)	145 m.p.h. (126 knots)
VA (maneuvering)	135 m.p.h. (117 knots)
Vfe (flaps extended)	118 m.p.h. (103 knots)

With 300 HP IO-540-L1C5 engine

Vne (never exceed)	162 m.p.h. (141 knots)
Vno (max. structural cruising)	145 m.p.h. (126 knots)
VA (maneuvering)	135 m.p.h. (117 knots)
Vfe (flaps extended)	118 m.p.h. (103 knots)

C.G. range
(Landing Gear Fixed)

Landplane and Skiplane

<u>Gross Weight</u>	<u>Forward Limit</u>	<u>Aft Limit</u>
3200 lbs.	+17.0 in. (15.2% MAC)	+24.5 in. (27.2% MAC)
1900	+17.0 in. (15.2% MAC)	+24.5 in. (27.2% MAC)

Seaplane

<u>Gross Weight</u>	<u>Forward Limit</u>	<u>Aft Limit</u>
3500 lbs.	+17.0 in. (15.2% MAC)	+23.5 in. (25.5% MAC)
1900	+17.0 in. (15.2% MAC)	+23.5 in. (25.5% MAC)

Straight line variation between points given.

Additional limitations for specific ski and float installations may be contained in Notes 4 and 5.

Datum

Main landing gear beam center line.

M.A.C.

62.9 in. (L.E. of M.A.C. is +22.40 in. aft of datum).

Leveling Means

Aircraft cabin floor level – laterally and longitudinally.

Maximum Weight

Landplane and skiplane	3,200 lbs.
Seaplane	3500 lbs. (see Note 5 for specific weight limitation with each float installation.)

Minimum crew

1 (pilot)

Maximum
Occupants

5, including pilot. (2 at +17.8 in., and 3 at +58 in.)

Maximum Baggage

250 lbs. at 94 in.

Fuel Capacity

At +21.8 in.	<u>Liters</u>	<u>Imp. Gals.</u>	<u>U.S. Gals.</u>
Usable	372	81.9	98.3
Unusable	6	1.4	1.7
Total	378	83.3	100.0

Oil Capacity

11.4 liters / 10 imperial quarts / 12 U.S. quarts maximum

Control Surface
Movements

Wing Flaps	0°	up	8,15,22,32°	down
Aileron	18°	up	12°	down
Elevator (0° Stab.)	29.5°	up	21.5°	down
Stabilizer	6°	up	4°	down
Rudder	30°	left	30°	right

Serial Numbers
Eligible

28, 29, 30 (260 HP engine)
31 and subsequent. (260 HP or 300 HP engine)

Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification				
Approved Publications	<p><u>With 260 HP engine:</u> Transport Canada Approved Flight Manual FAC2-M100 dated May 20, 2000, Issue No. 3, and subsequent approved revisions.</p> <p><u>With 300 HP engine:</u> Transport Canada Approved Flight Manual FAC2-M300 dated May 20, 2000, Issue No. 1, and subsequent approved revisions.</p> <p><u>With 260 HP or 300 HP engine:</u> Maintenance Program FAC2-M200.</p>				
Certification basis	<p><u>FBA-2C</u> CAR 3 dated May 15, 1956 and Amendments 3-1 to 3-7 inclusive. Type Certificate No. A7EA issued June 23, 1965. Date of Application for Type Certificate February 11, 1963.</p> <p><u>FBA-2C1</u> Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 through 23-6 except as follows: FAR 23.51; 23.65; 23.75; 23.77; 23.611; 23.619; 23.623; 23.683; 23.689; 23.775; 23.871; 23.954; 23.1147; 23.1323; and 23.1563 amended by amendment 23-7. FAR 23.1524 amended by amendment 23-10. FAR 23.771 and 23.1365 amended by amendment 23-14. FAR 23.607; 23.675; 23.685; 23.733; and 23.1309 amended by amendment 23-17. FAR 23.959 amended by amendment 23-18. FAR 23.1301 amended by amendment 23-20. FAR 23.1353; 23.1541; and 23.1559 amended by amendment 23-21. FAR 23.603; 23.605; 23.863; and 23.1545 amended by amendment 23-23. FAR 23.1529 amended by amendment 23-26. FAR 23.995; 23.1143; 23.777; 23.779; and 23.781 amended by amendment 23-29. FAR 23.1; 23.853; and 23.1165 amended by amendment 23-34. FAR 23.787 amended by amendment 23-36. FAR 23.1311 and 23.1321 amended by amendment 23-41. FAR 23.301; 23.331; 23.351; 23.421; 23.423; 23.425; 23.427; 23.441; 23.443; 23.677; 23.701; 23.735 and 23.831 amended by amendment 23-42. FAR 23.901; 23.903; 23.905; 23.925; 23.951; 23.953; 23.955; 23.957; 23.963; 23.965; 23.967; 23.971; 23.973; 23.975; 23.977; 23.991; 23.993; 23.997; 23.999; 23.1093; 23.1145; 23.1303; 23.1322; 23.1337; 23.1351; 23.1357; 23.1361; and 23.1385 amended by amendment 23-43. FAR 23.562(a) and 23.562(e) amended by amendment 23-44. FAR 23.33; 23.305; 23.321; 23.397; 23.561; 23.572; 23.613; 23.621; 23.655; 23.731; and 23.1549 amended by amendment 23-45. FAR 23.783; 23.805; 23.807 and 23.811 amended by amendment 23-46.</p> <p>FAR 36 dated December 1, 1969, as amended by Amendment 36-1 through 36-22.</p>				
Import eligibility	A U.S. Airworthiness Certificate may be issued on the basis of the Canadian Department of Transport "Certificate of Airworthiness for Export" signed by or for the Minister of Transport. This form must contain the following statement: "This certifies that the aircraft described below has been manufactured in conformity with data forming the basis for D.O.T. Type Approval No. 67, Issue 8 (FAA Type Certificate No. A7EA) and to be in a condition for safe operation."				
NOTE 1.	<p>(a) Current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter.</p> <p>(b) The certificated empty weight and corresponding center of gravity locations must include unusable fuel.</p> <table> <tr> <td>FBA-2C</td><td>7.5 lbs. (+22.2 in.) and unusable oil of 2.8 lb. (-38.8 in.).</td></tr> <tr> <td>FBA-2C1 Bush Hawk</td><td>10.2 lbs. (+21.8 in)</td></tr> </table>	FBA-2C	7.5 lbs. (+22.2 in.) and unusable oil of 2.8 lb. (-38.8 in.).	FBA-2C1 Bush Hawk	10.2 lbs. (+21.8 in)
FBA-2C	7.5 lbs. (+22.2 in.) and unusable oil of 2.8 lb. (-38.8 in.).				
FBA-2C1 Bush Hawk	10.2 lbs. (+21.8 in)				

NOTE 2. The following placards must be displayed in clear view of the pilot:

FBA-2C

(a) "THIS AIRPLANE MUST BE OPERATED AS A NORMAL CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS IN THE FORM OF PLACARDS, MARKINGS AND MANUALS".

(b) "NO ACROBATIC MANEUVERS INCLUDING SPINS APPROVED".

FBA-2C1

(a) "The markings and placards installed in this airplane contain operating limitations which must be complied with when operating this airplane in the normal category. Other operating limitations which must be complied with when operating this airplane in this category are contained in the Airplane Flight Manual."

(b) Normal Category: "No acrobatic maneuvers including spins approved."

NOTE 3. **FBA-2C**

Serial Nos. 3,5 and up, eligible for 3,000lb. Gross weight modification on seaplane per Found Brothers Modification No. 117, and the following are applicable:

Airspeed limits (CAS)	Vne (never exceed)	153 m.p.h.
	Vno (max. structural cruising)	122 m.p.h.
	VA (maneuvering)	133 m.p.h.
	Vfe (flaps extended)	111 m.p.h.
C.G. Range	Fwd. Limit 15.3 in. aft of datum at all weights	
	Aft limit 23.6 in aft of datum all weights	
Maximum Weight	3,000 lbs.	
Control surface movements	Wing Flaps	0° up 32° down
	Aileron	18° up 12° down
	Elevator (0° Stab.)	29.5° up 21.5° down
	Stabilizer	4.5° up 3.5° down
	Rudder	30° left 30° right
Equipment	In addition to the pertinent basic equipment specified in the applicable airworthiness regulations (CAR 3), the following items of equipment must be installed:	
	(a) Hartzell Constant Speed HC-927K-1D/8847-0 70 lb. (-63.0 in.)	
	Diameter: maximum 88 in. minimum 88 in.	
	Pitch setting at Station 30.0 in.: low 12°, high 26.4°	
	Woodward Constant Speed Governor B210340	
	(b) D.O.T. approved Flight Manual dated April 28, 1965	
	(c) Stall warning indicator per Found Brothers Drawing No. W-535.	

NOTE 4. **Ski Installations:**

FBA-2C

(a) Federal Model CF3000; installed in accordance with Found Brothers Drawing No. 2C36-1 Issue 2C.

NOTE 5. **Float Installations:**

FBA-2C

(a) EDO Model 249A-2870; installed in accordance with Found Brothers Drawing No. 2C37-1 Issue 2A.

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- (a) EDO Model 628-2960 floats , or Model 249A-2870 (modified per EDO drawing X-43521) floats, with 260 HP engine. Float installation in accordance with Found Aircraft Canada Inc. drawing No. D210 Issue 1. Maximum gross weight allowable 3200 lbs.
- (b) Aerocet Model 3500 floats with 260 HP engine.
Float installation in accordance with Found Aircraft Canada Inc. drawing No. D211 Issue 1.
Maximum gross weight allowable 3350 lbs.
- (c) Aerocet Model 3500L floats with 260 HP engine.
Float installation in accordance with Found Aircraft Canada Inc. drawing No. D211 Issue 1.
Maximum gross weight allowable 3350 lbs.
- (d) Aerocet Model 3500 floats with 300 HP engine.
Float installation in accordance with Found Aircraft Canada Inc. drawing No. D212 Issue 1.
Maximum gross weight allowable 3500 lbs.
- (e) Aerocet Model 3500L floats with 300 HP engine.
Float installation in accordance with Found Aircraft Canada Inc. drawing No. D211 Issue 1.
Maximum gross weight allowable 3350 lbs.

NOTE 6. **FBA-2C1**

Oversize Tire Installation:

- (a) GAR-AERO oversize wheels and tires, plus oversize tail wheel, with 260 HP or 300 HP engine.
Wheel and tire installation in accordance with the following Found Aircraft Canada Inc. drawings:
No. D205 Issue 1 with 260 HP engine.
No. D206 Issue 1 with 300 HP engine.

NOTE 7. Position and Instrument Lights per Found Brothers Modification No. 118.

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